

Glomulin siRNA (h): sc-45356

BACKGROUND

Glomuvenous malformations (GVMs) are cutaneous venous lesions characterized by the presence of smooth muscle-like glomus cells in the walls of distended vacular lumens. Complete loss of function of the glomulin gene, which resides within chromosome 1p22.1, results in GVMs. Glomulin, also designated FKBP-associated protein (FAP), exists as two isoforms FAP48 and FAP68. Glomulin is crucial for normal development of the vascular system and plays a role in the differentiation of vascular smooth-muscle cells and vascular morphogenesis. Glomulin is a ubiquitously expressed membrane anchoring protein.

REFERENCES

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2. Neye, H., et al. 2001. Mutation of FKBP associated protein 48 (FAP48) at Proline 219 disrupts the interaction with FKBP12 and FKBP52. *Regul. Pept.* 97: 147-152.
3. Brouillard, P., et al. 2002. Mutations in a novel factor, Glomulin, are responsible for glomuvenous malformations. *Am. J. Hum. Genet.* 70: 866-874.
4. Krummrei, U., et al. 2003. The FKBP-associated protein FAP48 is an antiproliferative molecule and a player in T cell activation that increases IL-2 synthesis. *Proc. Natl. Acad. Sci. USA* 100: 2444-2449.
5. Boon, L.M., et al. 2004. Glomuvenous malformation (glomangioma) and venous malformation: distinct clinicopathologic and genetic entities. *Arch. Dermatol.* 140: 971-976.
6. McIntyre, B.A., et al. 2004. Glomulin is predominantly expressed in vascular smooth muscle cells in the embryonic and adult mouse. *Gene Expr. Patterns* 4: 351-358.
7. Brouillard, P., et al. 2005. Four common glomulin mutations cause two thirds of glomuvenous malformations ("familial glomangiomas"): evidence for a founder effect. *J. Med. Genet.* 42: e13.

CHROMOSOMAL LOCATION

Genetic locus: GLMN (human) mapping to 1p22.1.

PRODUCT

Glomulin siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Glomulin shRNA Plasmid (h): sc-45356-SH and Glomulin shRNA (h) Lentiviral Particles: sc-45356-V as alternate gene silencing products.

For independent verification of Glomulin (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-45356A, sc-45356B and sc-45356C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNases and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Glomulin siRNA (h) is recommended for the inhibition of Glomulin expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 μ M in 66 μ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

GENE EXPRESSION MONITORING

Glomulin (YY-Z): sc-100752 is recommended as a control antibody for monitoring of Glomulin gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Glomulin gene expression knockdown using RT-PCR Primer: Glomulin (h)-PR: sc-45356-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.